# THE FAILURE OF INVAGINATION HERNIOTOMY FOR INDIRECT INGUINAL HERNIA

by

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THE SEARCH for a simple secure method for the repair of indirect hernia continues. In 1899 Kocher (Kocher, 1903) introduced displacement of the invaginated neck of the sac lateral to the inferior epigastric vessels. This method never achieved the popularity of that suggested by Bassini but has been practised by various surgeons; C. J. A. Woodside of Belfast used it throughout his surgical career and claimed, but never published, excellent results.

In 1964 Celestin published a modification of the Kocher method which had been used by Grant-Batchelor for at least 10 years. This consists of isolation of the sac up to, but not including, the internal ring, not disturbing the natural adhesions between the fascia transversalis and peritoneum (Fig. 1). The sac is

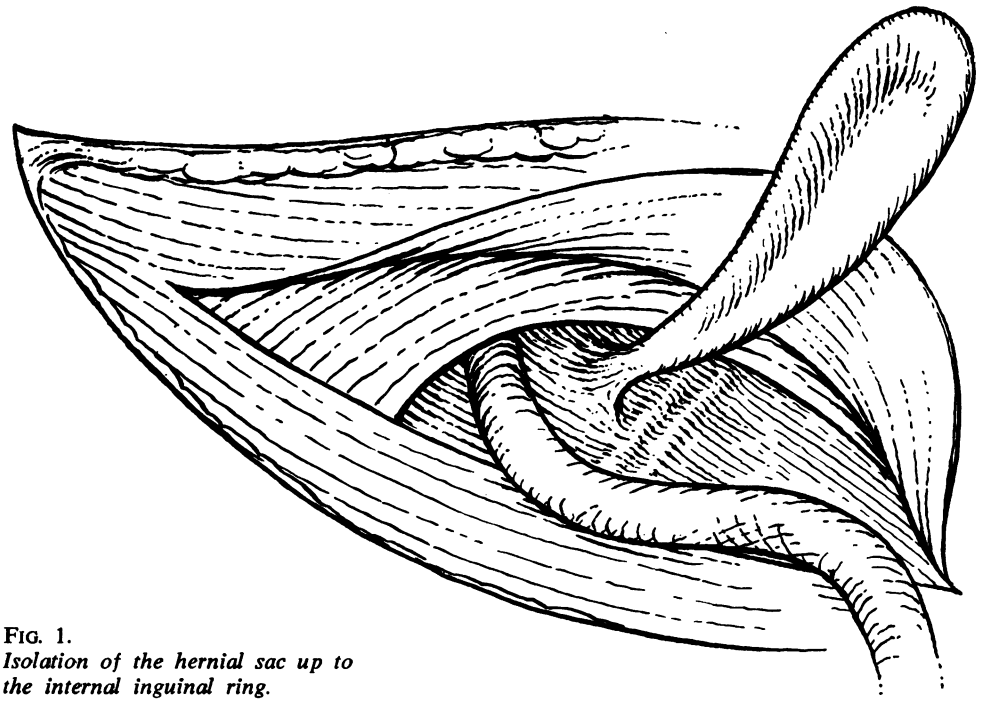

FIG. 1.
*Isolation of the hernial sac up to the internal inguinal ring.*

invaginated and brought out through the parietes in the vicinity of the anterior iliac spine. It is twisted, thereby tightening the posterior wall of the canal, and after closure of the small opening in the peritoneum around the twisted sac, the latter is anchored to the oblique muscles (Fig. 2). The reported results were excellent: 5.4 per cent recurrence rate in 212 patients with 88.5 per cent recall at 5 to 9 years after operation; if those over 70 years of age were excluded the failure rate dropped to 4 per cent. The method was recommended for routine use in all adult cases below the age of 70 years.

In 1964 the senior of the present authors, after satisfying himself that the method appeared to give a secure repair, started using it routinely in patients under the age of 70 years. In 1967, after 37 operations, the trial was discontinued because it was obvious that the recurrence rate was unacceptable. At review 3½ years after operation, 35 patients were examined (2 could not be traced). There were 6 recurrences – 17 per cent (Table). In 2 cases there had been sudden complete recurrence as if the anchoring sutures of the invaginated sac had given way.

TABLE
*Invagination Herniotomy*

| *No. of cases* | *Reviewed at 3½ years* | *Recurrences* | *Percentage Recurrence* |
|---|---|---|---|
| 37 | 35 | 6 | 17 |

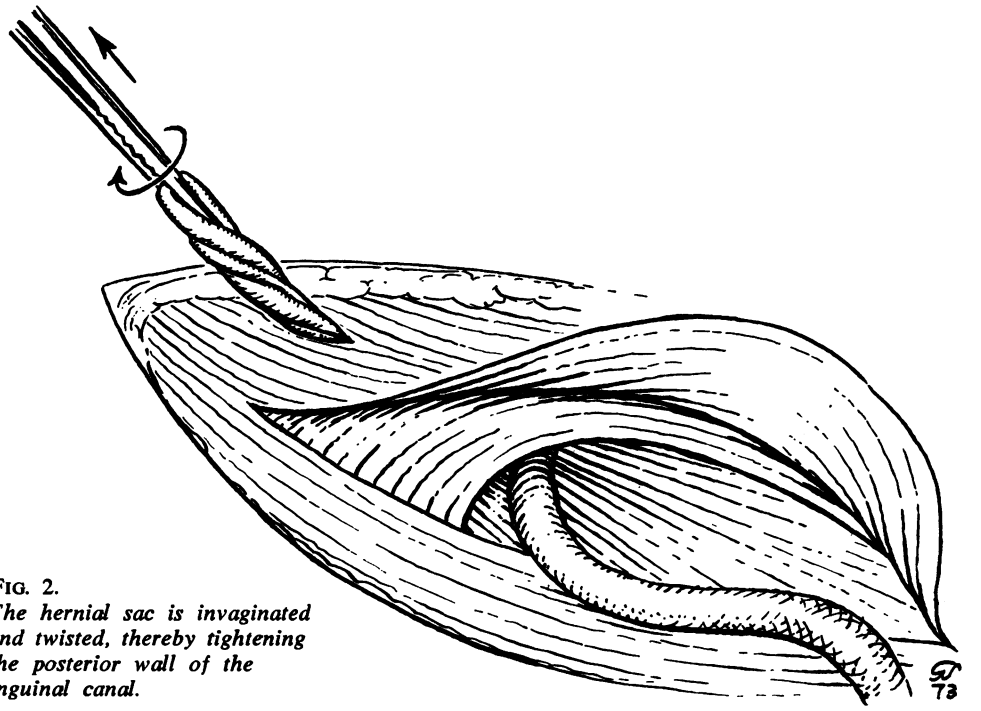

FIG. 2.
*The hernial sac is invaginated and twisted, thereby tightening the posterior wall of the inguinal canal.*

Obviously either the method is bad or the surgical technique was at fault. The choice between the two possibilities can be helped by comparison with another personal series using a different method. This is provided by 44 consecutive adult cases of inguinal hernia of all types – direct, indirect and 7 recurrent and including 5 patients over the age of 70 years – operated upon by the senior author or with his direct assistance in the 12 month period commencing February, 1970. The method of repair was the "triple repair" recommended by Gibbon and Choudhury (1969).

These patients were reviewed by one of us (R.A.B.M.) between 2 and 3 years post-operatively. The recall rate was satisfactory in that 39 (89 per cent) were examined, 2 who had emigrated replied by letter, and the case-notes of 3 who had died between 1 and 2 years post-operatively were available. There had been only one recurrence in the group.

## Discussion

The good results in the second series would justify the assertion that poor surgical technique was not the cause for the unacceptably high recurrence rate in the first series. Therefore invagination herniotomy cannot be recommended as a simple secure herniotomy.

However, during the 3 years of the trial, invagination of the sac was used as an incident during prostatectomy in 2 patients over the age of 70 years and during more extensive herniorrhaphy in 9 patients. The eldest of the 11 died 18 months after operation and there had been no recurrence during the period of review in the other 10. The method may therefore have a place as a supplementary method of repair during herniorrhaphy or during prostatectomy when a more radical opening-up tissue planes may not be indicated.

## Summary

Comparison of the results in two personal series of repair of inguinal hernia shows that a recurrence rate of 17 per cent in invagination herniotomy is more likely to be due to a bad method rather than to bad surgical technique. The method cannot be recommended as the sole method of repair in indirect inguinal hernia.

## References

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